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AUGUST 19 1891

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Garden and Forest.

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The Northern Pitch Pine. (Illustrated.)
EDITORIAL.

Dijon.—II.
By MRS. SCHUYLER VAN RENSSELAER.

Some American Perennials.
By F. H. HORSFORD.

Report of the Meeting of the Society of American Florists at Toronto.

The paper will contain an illustration of Pinus rigida, from a photograph.

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Architectural Fitness.

AMERICANS are gradually learning that fitness, appropriateness, is the foundation of all artistic excellence, and, though the lesson is not yet fully acquired, we are making visible progress toward the realization of this quality in our various classes of buildings. The improvement is perhaps most manifest in our country houses, which we design with a more intelligent regard for the requirements of site and environment than we did even ten years ago, and a truer sense of the fact that in such houses simplicity is a cardinal virtue. There has been a reaction against conventionality on the one hand, and against ostentation on the other, and it has been inspired by a new-born feeling for architectural fitness.

But in a reaction men are almost certain to go too far, and so it is not surprising to find that in trying for simplicity we sometimes fall into rudeness. This shows, of course, that we have not fully understood the meaning of fitness as an architectural term; we have remembered that a structure should harmonize with its surroundings, but have forgotten that it should also harmonize with the ideas of cultivated men and women who are the heirs of all the ages, living in a state of superior enlightenment, and inheriting the practical processes as well as the tastes of countless generations of skillful builders. Moreover, in thus trying to express part of the significance of the word fitness, we may miss true simplicity; for civilized, intelligent men can produce rude-looking structures only by an effort so deliberate and self-conscious that it lays them open to the charge of affectation.

We cannot object to an Adirondack camp or a fishing-lodge or a hill-side studio, be it ever so rough and rude. It is designed as a shelter in a semi-savage sort of existence, and may be as appropriate to the temporary needs and pursuits of its inhabitants as to the wild scenes amid which it stands. But when costly buildings in civilized neighborhoods are built for permanent use in imitation of the materials and methods naturally adopted for temporary homes in the wilderness, it may be questioned whether the interests of true simplicity, or of true appropriateness, are subserved.

The tendency to which we have referred finds many illustrations in the use of boulders, or roughly cut stones, in constructions which should wear a refined and dignified aspect, as well as a simple one. Undoubtedly, this practice has been largely inspired by the example of Richardson. An architect so original, strong and skillful as he could not fail to influence profoundly the general course of his art; and, as with every great master, this influence has been partly for good, partly for evil. Few other buildings in this country, and certainly no other small building, have excited so much attention, been so often described, pictured and discussed as the gardener's lodge which he built, of huge rough boulders, in the village of North Easton, near Boston. It is, indeed, a picturesque and interesting piece of work, but it has certainly been imitated in ways which Richardson never anticipated, and he would have been distressed by a sight of some of the progeny it has engendered.

In certain places and for certain purposes the use of boulders, whether large or small, is not only allowable, but praiseworthy. It is both sensible and appropriate to use them, for example, in the foundations or the basement of a country house on land where they abound and can be had at little cost and trouble. But even in such spots as this it is seldom desirable that whole houses should be built of them, for we do not want an American country home to wear the aspect at once rude, unrefined and ponderous, which their sole employment gives.

In other parts of New England one may wisely use, instead of boulders and for a similar purpose, stones roughly split from neighboring granite-ledges; but, again, and for the same reasons, it is seldom wise thus to construct a whole house. We want simplicity and we want solidity, but we do not want coarseness or the affectation of simplicity. A house with an interior such as every American demands, made comfortable by a hundred ingenious devices and beautiful by the skilled work of a score of different artisans, should have an exterior of consonant expression; and rough-hewn stones or roughly cemented boulders cannot give this expression.

But it is not only in private country homes that our methods of using stone are frequently erroneous. Country churches and public buildings, and even the most ambitious city structures, are often open to criticism in this respect. Even in urban parks the effort to adapt the architectural work to rural surroundings may be a departure from genuine simplicity. A park is one of the most complicated and refined of the artistic creations of mankind; and its beauty and unity may be impaired if any feature of man's creating does not show the same kind and degree of skill and refinement as the others that surround it. A park must depend for the most part upon nature for its charm, but it must also conspicuously depend upon art; and it is trite to say that when art is set to work its activity should be frankly and clearly confessed. No matter how rural in character a park may be, or how pure and undisturbed the sylvan charm of some of its remoter parts, there is no place where the work of man ought to be done with greater skill, more perfect finish, or (using the term in its best sense) a franker artificiality. Almost all such work is done in this manner in all our parks. Their driveways are not constructed like country roads of even the better sort; their lawns are not left like fields to a growth of untended grass; nor are their shrubberies allowed to grow in the wild luxuriance so beautiful beside a rural highway. When the engineer and the horticulturist are thus showing the highest level to which modern science and art have attained, the architect should work in a spirit similar to theirs. Structures which look rough, casual, almost barbaric and affectedly simple are not appropriate in a carefully tended pleasure-ground,

planted with exotic trees and flowers and bisected by scientifically built and neatly curbed roads, even though we may know that as much thought and as much pains, of a certain kind, have been expended on their construction as though the outcome were more clearly artistic and refined.

The Central Park was laid out before the modern taste for boulders and rough-hewn stones had developed, and in it one may well study the method of treating architectural features in such a place. Here and there, in quiet corners and shady nooks, we find rough little flights of steps and rustic summer-houses of unhewn wood; but in all conspicuous places, and for all important constructions, work of a more polished and elegant sort is employed. But in the new Franklin Park at Boston, for example, there are structures in the most conspicuous situations which would seem more appropriate in a woody glen a hundred miles from any town. A drinking-fountain, carefully built of jagged stones so that it looks as if carelessly thrown together for a temporary purpose, may have a beauty of its own, but whether it is fitly placed beside the principal building, and near the principal driveway of an urban park, is open to question. Steps of rude slabs, scarcely revealing the use of the chisel, hardly seem appropriate in contact with the accurately shaped and smoothed curbing of this drive. In building the gateways at the principal entrance to this beautiful pleasure-ground it seems to have been the artist's purpose to make them inconspicuous, and thus disturb as little as possible the rural effect of the outlook over the distant country. But the existence of gateways, and their eminently artificial character, cannot really be disguised; and to build them wholly of small boulders sacrifices beauty and appropriateness to an unattainable end. A comparison of these gateways with those recently erected at one of the southern entrances to Prospect Park, in Brooklyn, would prove, we think, that the more confessedly artistic a work of art is made the better is its effect in such a situation. And at Prospect Park the low marble seats, small classic-looking shelters and graceful piers, interfere no more with the prospect than the rugged-looking seats and shelters at Franklin Park.

Of still more doubtful propriety is the use of unhewn stones in the construction of bridges. It seems contrary to the primary canons of art that an arch should have voussoirs of irregular shape and different lengths, so that, instead of seeming strong and homogeneous, they appear to be sliding past one another. Yet many rustic bridges have been erected in this fashion. How Richardson thought a bridge in a park ought to be built is shown by the one over which Boylston Street crosses the Fens in Boston. It is entirely devoid of ornament, perfectly simple; but with its wide, graceful, yet vigorous sweep, its beautifully modeled buttresses and coping, and the carefully finished surface of its stones, it is as true and refined and as noteworthy a work of art as any of the more elaborate things he ever built. Not far away now stands another bridge of three arches, built in the prevalent "natural" manner. In general design it is very good, and were its fabric as architectural and its finish as perfect as those of Richardson's bridge, the two would form a most happy contrast. But it looks weak despite its actual solidity, and careless despite the careful study unquestionably bestowed upon it, while its curtain of vines is not, we think, a fortunate substitute for an architectural balustrade in a work of art designed for a place which will soon be in the heart of a great city. In structures such as these we seem to be trying to go back to the infancy of art, but such efforts can hardly result in true simplicity or true appropriateness to modern tastes, conditions and abilities.

We invite attention to a letter from Mr. Charles Eliot in another column of this paper. Referring to Mr. Baxter's project for a Massachusetts forest, Mr. Eliot suggests the creation of a general Board of Commissioners who can act for all the cities and towns which are comprised in Greater Boston. It is generally admitted that, as this large and populous district becomes still more densely inhabited, there will be need for many more open spaces for recreation-grounds and breathing-places. As the case now stands, each of the municipalities can select grounds within its own limits, but where this is done the action must necessarily be controlled by purely local considerations. In many cases the most favorable grounds to be selected would extend across one or more of these town or city boundaries, and unless something like united action can be secured on a plan which embraces within its scope the entire area in question, there is little hope that a sufficient number of plots will be reserved, or that these plots will be the best ones for the purpose they are intended to fulfill.

It is very plain that co-operation is an absolute necessity in a case like this. This principle is one with which our people should become familiarized, for it is capable of a much wider application. Wherever forests need to be reserved at the sources of rivers the importance of co-operation by different states is apparent. Such rivers as the Connecticut, the Merrimac and the Ohio, whose head-waters are in the highlands of different states, can never be adequately protected unless all these states unite upon some general plan of forest-preservation. The board suggested by Mr. Eliot might therefore prove of value not only immediately to the eastern part of Massachusetts, but it might set an example which could be followed to advantage on a much more comprehensive scale throughout the country.

The Seeding of the Bamboo.

THE hardier species of Bamboo are becoming deservedly more popular year by year for the adornment of English pleasure-grounds. One thing, however, seems not unlikely to be lost sight of, namely, the fact that the culms of the Bamboo flower but once, the plant perishing immediately after the ripening of the seed. After flowering and seeding, when the plants have reached the climax of their grace and beauty, no art of the gardener can stay their death. It would be, I imagine, almost impossible to determine the age at which these hardy Bamboos will produce flowers when grown in this country; most probably the term of years will differ with the various species.

With regard to the great Bamboo of tropical India, *Bambusa arundinacea*, it is a well-ascertained fact, that the coming to maturity of this gigantic Grass only occurs after a growth of some fifty years' duration; and the phenomenon of its flowering, seeding and subsequent death in India and other climes—where it covers with its huge and picturesque clumps many square miles of country—is an extraordinary spectacle which can have been seen but by few Englishmen of the present generation.

It is unnecessary to give any lengthy description of the plant; suffice it to say, that in the locality in India where I had the rare fortune of witnessing the flowering and seeding of this gigantic Grass on a large scale, the culms frequently attain a height of from sixty to seventy feet, and a diameter at their thickest part of from eight to ten inches. These culms are furnished with lateral branches, throughout their whole length adorned with a profusion of light green leaves. The plant is deciduous, shedding its leaves in India during the dry season, and renewing them on the approach of the spring showers. The clumps present the apppearance of colossal plumes of feathers, and when seen in full leaf are beautiful beyond description.

The soil of the tract of country the Bamboo affects in south India is mostly shallow, with a gritty, ferruginous subsoil, and it is not found where the rainfall is excessive. When the clumps are in full vigor, the culms are produced of the above dimensions with amazing rapidity.

It was during the years 1863–1864, while engaged in Coffee-planting in the district of Wynaad, in the province of Malabar, that I witnessed the phenomenon of the seeding of *Bambusa arundinacea*. The plantation I had charge of at the time was situated in the midst of an extensive Bamboo jungle within but a short distance of the frontier of Mysore, and on the main road from the Malabar coast to Seringapatam and Bangalore. At the time of my arrival in the district, the magnificent Bam-

boo-forest, interspersed with such deciduous hard-wooded trees as Teak, Kino, Rose and Sandal-woods, and others of an equally valuable description, was, although unknown to me at the time, upon the eve of a sudden and wonderful transformation. Hundreds of square miles thickly covered with the exquisitely graceful clumps of the Bamboo, giving to the landscape as far as the eye could reach a beauty difficult to describe, were to be changed by fire in the brief period of a little over a year into a charred and blackened wilderness. The myriads of nodding plumes that for half a century had graced the woodlands were, at the call of Nature, to blossom, yield their seed, and disappear from the face of the earth as by the breath of a destroying angel.

The south-west monsoon rains of 1863 had ceased about the middle of September, and left the jungle tracts of Malabar in the very heyday of their glorious greenery. The Bamboo-plumes waved to and fro by the gentle breezes which still prevailed from the westward and glistened in the light of a tropical sun, as yet showing no trace of the change they were so soon to undergo. As the season advanced, hot parching winds from the east began to take the place of the more kindly breezes from the west, and by Christmas the leaves of the Bamboo thickly covered the ground. Simultaneously with the disappearance of the leaves from the laterals, the inflorescence began to appear, and the aspect of the country in every direction changed as if by magic. No one was prepared for such an eventuality, and the English planters in the district were struck with something akin to alarm when the fact dawned upon them that, in the course of a very brief period, not a living Bamboo would be left in the forest. A few there were who refused to believe that the culms would perish after ripening their seeds, and were only persuaded by the actual realization of the fact. As nearly as I can remember, the seed was matured by the middle of May, the panicles of grain weighing down the culms to a third of their length, and giving them withal a graceful as well as fruitful appearace. When the seed, which was about the size and had much the appearance of small oats, had fully matured, it fell to the ground in showers by every passing breeze, and then came a happy season for both man and bird. Sea-fowl, spur-fowl, partridge, jungle-fowl and quail, with which the jungles abounded, reveled in and fattened upon the plentiful supply of good food so suddenly bestowed upon them by the hand of Nature, and man himself was not slow to take advantage of the offering. The coolies from Mysore employed on the Coffee-plantations could with difficulty be induced to remain steadily at work during this Bamboo harvest, and the jungle tribes could not be persuaded to work at all, but subsisted solely on the fallen grain of the Bamboo so long as any could be gathered from the ground. This seed they appeared to highly value, and it seemed to be very nutritious. The grain was ground into meal by the aid of small hand-mills, and baked in the form of cakes, or boiled into a thick porridge. I myself ate the cakes on several occasions, and found them fairly palatable. These jungle tribes, although perfectly aware of the value of the vast granary thus laid at their feet, were, notwithstanding, improvident to a degree. They ate abundantly of the fruit while it lay on the ground, but made no provision against the approaching destruction of the whole by jungle-fires. So, after these had licked the ground, they had, perforce, to return to work on the Coffee-plantations. At the height of the dry season, and when the earth was thickly covered with a coating of Bamboo-leaves and seed, these fires began to do their work, and apparently so completely, that it was hard to believe that a single Bamboo-seed could have escaped destruction, and that in the course of a decade or so, another such magnificent Bamboo-forest could be produced. But Nature in some mysterious way was equal to the occasion, and before I left India, in 1877, the Bamboo zone of Malabar and Mysore was clothed with another jungle, consisting of clumps approaching in size and grandeur those that perished in 1863.

From the date of the seeding of the Bamboo the clumps stood throughout the following monsoon leafless and dead, but intact; it was not till nearly a year after that their complete destruction by fire began. When the dead and sapless clumps caught light the whole country was filled with flame and smoke for weeks together; loud reports were heard night and day without intermission, resulting from the pent-up gases within the hollow culms, and the whole Bamboo zone, so picturesque and beautiful but a twelvemonth before, was quickly reduced to a scene of desolation. The total destruction of the clumps, however, was not accomplished in one season, many escaping the fires till the second, and some till the third.

The young seedlings soon began to appear, but made slow progress for several years. As time went on the annual growth of culms waxed stouter and stouter, till at last a thick undergrowth of low Bamboo tufts covered the ground, which, in the fullness of time, began to send up gigantic canes, till the forest was restored to its former strength and beauty.

With reference to the period of time required for the maturation of *Bambusa arundinacea*, I was at some little trouble, while in India, to ascertain from the native tribes inhabiting the jungles of the district the approximate duration of its existence, and was told by several men, apparently about sixty years of age, living widely apart, that they remembered a similar phenomenon of the seeding of the whole of the Bamboos of the district when they were boys. From this I concluded that about fifty years was the limit to the life of this giant species of Bambusa.

About three months before the flowering of the Bamboo I had occasion to clear some thirty or forty acres of land for the purpose of Coffee-planting, the culms of the Bamboo being cut close to the ground. I waited patiently, curious to know the result of such an operation. When the monsoon rains began the huge stools left in the ground began at once to send up numerous small culms of from eight to ten feet in height, and furnished with laterals. On the cessation of the rains these immediately flowered and seeded, after which the old stools perished absolutely, so that the act of cutting down the original culms had only the effect of delaying, not frustrating, Nature in her efforts at reproduction.—*J. Lowrie, in the Gardeners' Chronicle.*

How We Renewed an Old Place.

XVI.—THE BLESSING OF THE RAIN.

A KINDLY critic has remonstrated with me for setting flowering plants around the trees, as contrary to good rules. I freely admit the fact, but in extenuation of the fault would urge that for the first year or two the bare polls of the trees, cut in till they were not much better than scrubbing-brushes, were so ugly that I wanted to distract people's attention from them. Moreover, the Geraniums and Heliotropes and Nasturtiums were handy for watering and plucking, facts worthy of consideration in a region of dry, hot summers, so that I was tempted, like my mother Eve before me, into willful sin.

Unlike the fault of our first parents, however, my fall from grace is not permanent. The trees have taken it upon themselves to correct the error in taste by taking all the nutriment away from the flowers and by spreading out their branches until the beds are too shaded to furnish blossoms. This summer the cold June has added to their other discomforts, and the day of flower-beds in the neighborhood of the trees is ended. Should these last do their duty this year as they promise, they will be far enough along for us to permit the grass to grow close up to their trunks, which will greatly improve the beauty of the lawn, and the natural look of the trees themselves, which began to make their best growth about the first of July, after they had reaped the full benefit of the heavy rains of later June and were rid of the rose-bugs.

Refreshing, indeed, was the long storm that succeeded the burning days, and it was a joy to see the thirsty grass and plants drinking in life with every drop. I am convinced that the true way to render yourself indifferent to inclement weather in the country is to plant trees. No rain can ever hurt them, and, when they are freshly set out, each shower is a satisfaction to their owner, for it seems as if they could be seen to grow under its kindly influence, and thus a day or week of hard rain, instead of a weariness, becomes a positive delight. I am not sure that this would bring compensation to the young for having to forego their active pleasures, but the more I become interested in gardening the more I am convinced that it is the appropriate pleasure for middle life and old age.

Youth hates to wait for anything, and wishes to realize its dreams so soon as they are conceived; but as we advance in years we take a sober satisfaction in waiting a little for our pleasures, and also we like something that can recur, and that is interminable. Most other delights once experienced are exhausted, but gardening grows by what it feeds on. It is the same, and yet never the same; it can be forever renewed; it can be indefinitely extended; it is within the reach of all dwellers in the country, where home amusements are most needed. It can be compassed by the slenderest purse, and it will give a man a chance to spend a fortune if he so desire. It has its agreeable economies, and its fascinating extravagances. It can be made to satisfy the most orderly dispositions, and also return beauty and grace from careless and wild

arrangements. It can be utilitarian and lucrative, it can be merely æsthetic and ornamental, or all four, just as the fancy takes you. In fact, it may be briefly characterized as Happiness for the million with no patent on it.

Added to all these charms is its wholesomeness, its absorbing character, and, best of all, a certain humanness about the occupation that brings one into pleasant relations with all sorts of people, and affords one a topic of conversation and a meeting-ground, even where he is limited to the most unpromising companions. The village crone forgets her gossip when you talk to her about her Rose-bushes or her last new Geranium slip; the rustic waxes eloquent over the merits of a new potato or a way of protecting melons, and you find yourself always interested and instructed, instead of bored, since almost any one you meet in the country can tell you something you are glad to know, or else he is eager to learn what you are doing yourself, which is a sure way to afford you entertainment, since every man is happy when allowed to ride his own hobby. All of which has a connection with rain, however little obvious it may be, since the moral of my discourse is, that when one becomes, not only resigned to rain but glad of it, he has taken a step toward true philosophy.

A garden after a shower has always an especial charm; everything is sweeter and fresher, even in its often bedraggled condition. I have a passion for dabbling in water-coloring of this description, and cannot keep my hands from the weeds and flowers when I venture forth to see how my favorites have borne the storm. It is a delight to put one's arms about a bouncing pæony, with its red cheeks all cold and dripping, and tie a string around it to keep its bright faces clean. The forward flowers kiss you as you struggle to encircle them; the wet leaves box your ears as if you were taking a liberty. It is some time before you can accomplish your purpose, and you arise from the encounter quite breathless and dripping, with the pink and white faces, huddled up together, all laughing at your condition.

It is June, and the last of the Fleur-de-lis are quite broken down, their pearly petals draggled in mud and defaced by water. This delicate French beauty will put up with no plebeian contact, but withers and dies if brought in contact with the earth. The Roses stand up, after their bath, quite fresh and shining, but the buds, which are so blighted by a heavy rain that they do not open afterward, remind me of the Austrian violinist who greatly admired an English beauty, but confided to a friend his reason for not offering to marry her:

"She vould *vash* me, and I should die."

Many things are broken down and require tying up. If the rain has continued for several days the chickweeds are rampant and overrun everything. New plants that have been on the anxious seat during the dry weather have decided to stay, and are putting forth satisfactory leaves.

The joyful Pear-trees shake their drops down upon you, the cat-bird sits on the grape trellis and inquires what you are doing there. It is a way he has. He lives in the box arbor and thinks he owns the earth, and that our strawberries are his. He scolds the cat and defies the robin, and has such a trig, gentlemanly air about him, with his well-brushed dark coat, that one might christen him Sir Charles Grandison. He makes me a bow and says civil things (or uncivil) in his own tougue, which, unfortunately, I do not understand.

"I thought you told me this parrot could talk?"

"So he can—ze parrot lankwich—you don't expect all ze lankwiches for ten tollar, do you?"

Thus our cat-bird, which costs us nothing but strawberries, discourses in a jargon which we would fain comprehend, so as to answer him according to his deserts; and sometimes of a Sunday morning he sings us a glorious tune.

When the rain comes, Apollo, the parrot, climbs to the top of the tree in which he is perched and spreads all his bright feathers to catch the shower. Elongating his wings, he makes them meet over his brow in the very altitude of the cherubim, and there, turning a somersault, he hangs head downward, that the water may thoroughly drench his plumage. With all his gold and red and green glittering with rain-drops, he resembles some superb blossom quivering on a stem, and makes a beautiful spectacle of himself. When his bath is done he chatters and laughs with glee, and sings his merriest song, with some disregard of rhythm and tune, but none of harmony, till all the smaller birds begin to pipe in company.

The dusty foliage emerges brilliantly shining and fresh. Every shower seems to bring a new spring, and the world never fails to be surprised at the renovation which succeeds the rain. There seem, indeed, to be new heavens and a new earth. The drooping evergreens lift up their tasseled heads and take courage; to them it means life and new hope. The vines throw out their tendrils, and the Honeysuckle emits a keener perfume. The white Lilies that come to rejoice us just as the Roses are going, gleam in the twilight, tall and fair. Who is it that says that it is a figure of the poets to mingle Roses and Lilies, since they do not blossom at the same time? With us the Irises and the white Flower de Luce linger till after the Roses are in bloom, and then, before the Queen is wholly out of sight, come these stately princesses, her followers, like train-bearers of high degree, all clad in white and gold, nearest the throne, if not rivals for the highest place of all. Is it the thorns that make the Rose the royal flower by rendering her difficult of access and surrounding her with a body-guard of lances? Who shall say? There are moods in which her sumptuous beauty and heavy fragrance seem less regal than the haughty, willowy grace of her rival flower, and we hesitate to choose.

And not the flowers alone rejoice in the life-giving drops, but the "sweet smale grass," refreshed and strengthened, lifts its green blades like the spear-heads of a rising army. The dusty mantle that has veiled its gentle beauty falls from it, and the wonderful variation of its tints again delights the eye. Those artists who set our teeth on edge with verdigris and arsenic floods, to represent this dearest and homeliest garment of our mother earth, seem to me never to have entered into and possessed its secret, the secret of myriad shadows, of myriad lights, each catching a reflection from its neighbor blade, the brown earth below, the azure sky above. No greenest green of foliage or meadow ever shocks the most sensitive vision, for Nature, truest of painters, never fails to break her colors with such subtle mixtures that only the utmost training of eye and hand enables the artist to hint her secret upon canvas; and he who, with a palette of crude pigments of raw primary colors, seeks to render the shifting emerald of spring, the topaz of the new-mown field, or the golden harvest, is as one who would catch the flash of the diamond or the burning heart of the ruby on the brush's point and think to imprison it forever.

There are some lines of Matthew Arnold that a wet garden always brings to mind, in which the poet has truly caught the spirit of the fragrant scene. None but a frequenter and true lover of gardens could in a few words have thus pictured the mingled dismay and hope with which one views his garden-plot after a rain has both distressed and refreshed it:

So, some tempestuous morn in early June,
When the year's primal burst of bloom is o'er,
Before the roses and the longest day—
When garden-walks, and all the grassy floor
With blossoms, red and white, of fallen May,
And Chestnut-flowers are strewn—
So have I heard the cuckoo's parting cry,
From the wet field through the vext garden trees
Come, with the volleying rain and tossing breeze;
The bloom is gone, and with the bloom go I!

Too quick despairer, wherefore wilt thou go?
Soon will the high Midsummer pomps come on,
Soon will the musk carnations break and swell,
Soon shall we have gold-dusted snapdragon,
Sweet-william with his homely cottage smell,
And stocks in fragrant blow;
Roses that down the alleys shine afar,
And open, jasmine-muffled lattices,
And groups under the dreaming garden trees,
And the full moon, and the white evening star.

Hingham, Mass. *M. C. Robbins.*

New or Little-known Plants.

New Orchids.

Ada Lehmanni, Rolfe.—A new species of Ada, originally introduced from New Granada by Mr. F. C. Lehmann, German Consul to the Republic of Columbia, after whom it is named. It has been in cultivation for some time. It is readily distinguishable from the well-known *A. aurantiaca* by its more rigid habit, shorter, broader and darker green leaves, which are mottled with gray, and by its white lip. It usually flowers during the summer, while the old species is well known as a winter-flowering plant.—*Gardeners' Chronicle*, July 11th, p. 34.

Catasetum atratum, Lindl., ♂ and ♀.—The female only of this species can claim to be a new garden Orchid, as the male has been known for many years. A very interesting case of the production of flowers of both sexes on the same raceme has occurred in the nursery of Mr. W. Brooks, of Weston-super-Mare. The two sexes are less dissimilar than usual, except in the column and ovary, which present the usual dif-

ferences. The sepals and petals are light green, with numerous blackish spots. Although borne on the same raceme, the females expanded several days in advance of the males, thus pointing to earlier development in this sex.—*Gardeners' Chronicle*, July 11th, p. 36.

CIRRHOPETALUM THONARSII, Lindl.—Although described nearly seventy years ago, and the original species of the genus, this rare Mauritian plant has only recently appeared in cultivation, for it is now evident that the Philippine plant which Lindley thought identical, and which has borne the name in gardens for so many years, is a different species. Plants were sent to Kew by C. W. Bewsher, Esq., of the Oriental Bank, Mauritius, together with other native Orchids. One plant which has now bloomed has light yellow flowers, without any spots. A second plant, believed to be spotted with red, has not yet flowered.—*Gardeners' Chronicle*, July 18th, p. 69.

CYCNOCHES CHLOROCHILON, Klotzsch, ♂ and ♀.—As in a previous case, it is the female flower which is new to gardens, the other sex having long been known. A female flower has appeared in the collection of Monsieur Houzeau de Lehaie, member of the Chamber of Representatives, of Hyon, near Mons, Belgium. It is larger and more fleshy than the male, with broader sepals and petals, and the crest of the lip much more obtuse. The ovary is also more than twice as thick and more strongly grooved, and the column scarcely half as long, at least four times as thick, without pollinia, but with a pair of large fleshy wings on either side of the well-developed stigma. The color is identical in the two sexes, which are thus far less dissimilar than in most other species of this singular genus.—*Gardeners' Chronicle*, July 18th, p. 69.

ODONTOGLOSSUM BERGMANI, L. Lind.—A handsome Odontoglossum in the way of *O. luteopurpureum*, but with chocolate spots on a white ground. It was awarded a first-class certificate of merit at a meeting of the Orchidéene, of Brussels, on April 12th last, when it was exhibited by Monsieur Bergman. It is suggested that it may be a variety of *O. luteopurpureum*, but I consider it a natural hybrid with *O. crispum*.—*Lindenia*, t. 286.

Kew. *R. A. Rolfe.*

Plant Notes.

Phalænopsis Schilleriana.

THE numerous species of Phalænopsis that have been introduced within the past thirty years are far from being as satisfactory as this fine old favorite, and, indeed, those that were known previously lack some of its best points. The utility of the plant is found in the profusion and lasting quality of its attractive flowers, and in the handsome character of its variegated foliage. Some descriptive and cultural particulars have already appeared in this volume of GARDEN AND FOREST, on page 117.

P. Schilleriana was introduced from Manilla in 1858 by Mr. Consul Schiller, a gentleman who had a famous collection of Orchids in Hamburg at that time, and in compliment to whom this species was named by Professor Reichenbach. This importation consisted of some thirty plants, only one of which, however, survived, and flowered at Hamburg two years later. In 1862 it flowered for the first time in England, at Broomfield, the place of the Mr. Robert Warner famous in Orchid history. Mr. Warner's plant seems to have been collected privately, and its native locality was not disclosed at the time. An idea of the progress which has been made in the search after new Orchids—of the devastation wrought by collectors, some will have it—may be obtained from the statement that only five kinds of Phalænopsis were known in England when *P. Schilleriana* had been introduced; between thirty and forty are now being cultivated in that country.

Many fine specimens of *P. Schilleriana* have been grown in England, and in late years a few have been produced in this country and Canada. A plant sent from London by Mr. Warner to the Russian International Exhibition, held at St. Petersburg in May, 1869, bore 120 fully developed flowers at one time. Two excellent plants, grown in the collections of Frederick Scholes, Esq., of Brooklyn, New York, were figured in the *Gardeners' Chronicle* of April 28th, 1888, and noted in the first volume of GARDEN AND FOREST. Mr. Scholes attributed his success with this plant to a liberal use of cow-manure.

The specimen, from a photograph of which the accompanying illustration was prepared (p. 390), flowered at the gardens of John Hoskins, Esq., Toronto, Canada, in 1890. It carried about seventy flowers. The same plant had 129 flowers this season, all fully in bloom at the same time. It is grown in a well-lighted stove in which the atmosphere is kept constantly moist by means of a hot-water tank in the centre. In other particulars the treatment does not differ from that observed in other establishments. An engraving of a plant at Melchet Court, England, the most extraordinary Phalænopsis of which we have any record, was given in the *Gardeners' Chronicle*, August 7th, 1875. This plant measured seven feet in height and five feet through, bearing flowers to the number of 378. When sold at auction a few months later it realized a sum exceeding $150.

Cambridge, Mass. *M. Barker.*

Some Recent Portraits.

The August issue of the *Botanical Magazine* contains figures of *Faradaya splendida* (t. 7187), a handsome tropical climbing plant, a native of Queensland, and dedicated to the physicist Michael Faraday. The plant is described as conspicuous by its handsome bright green foliage and copious panicles of very fragrant snowy white flowers which appeared at Kew for the first time in September of last year. An allied species, *F. Papuana*, of New Guinea, is also in cultivation at Kew, but has not yet flowered; *Cypripedium Californicum* (t. 7188), the handsome California Lady's-slipper which was figured in the first volume of GARDEN AND FOREST (page 281); *Pleurothallis immersa* (t. 7189), a New Granada Orchid, with small dirty brown flowers borne in elongated racemes rising above the leaves. It is a plant of considerable botanical interest, although gardeners generally will be inclined to pass it by. *Synantherias sylvatica* (t. 7190), a small East Indian aroid, is another plant which is curious rather than beautiful from the horticultural point of view; *Rehmannia rupestris* (t. 7191), the representative of a genus of *Scrophulariaceæ*, now known to consist of six or seven species, all natives of China, Formosa and Japan. It was discovered by Mr. A. Henry, in the province of Hupeh, growing only in almost inaccessible places on the faces of mountain-cliffs. It is a semi-prostrate plant, densely coated with whitish wool and having solitary axillary flowers, with long yellow tubes marked with purple on the inner surface of the limb. Of its horticultural value very little can be said, as the specimen which flowered at Kew, and which had been raised from seed taken from one of Dr. Henry's herbarium specimens, died as soon as it had flowered.

Cultural Department.

Russian and Polish Pears.

I BEGAN to try these Pears with many misgivings, but I think better of them every year. The hardiest of our old kinds I have been obliged to give up, after long and repeated trials; even our mildest winters blackened their new wood. Rather colder winters killed back nearly all the new growth, while one of our "rippers" killed every tree to the snow-line. There is rarely an interval between these extreme seasons long enough to enable us to see any fruit; and after twenty years of such experiments I gave it up beaten, having gathered just one ripe pear—from Jackson, a New Hampshire variety. When a fruit named for Old Hickory had to succumb, I felt justified in abandoning the field.

But before this end of the struggle I had received from my kind friends, Professor Budd, of Iowa, and the lamented Charles Gibb, of Quebec, a lot of cions from their then recent importations. From these, worked close to the ground on Vermont-grown stocks, I grew quite a lot of trees of many varieties. Professor Budd also sent me a few young trees from his earliest home propagations, so that I started almost even with them in my testings of their hardiness, and I have now a fine collection of these trees from six to twenty feet high, not one of which has lost a bud. Even Sapieganka, decidedly the

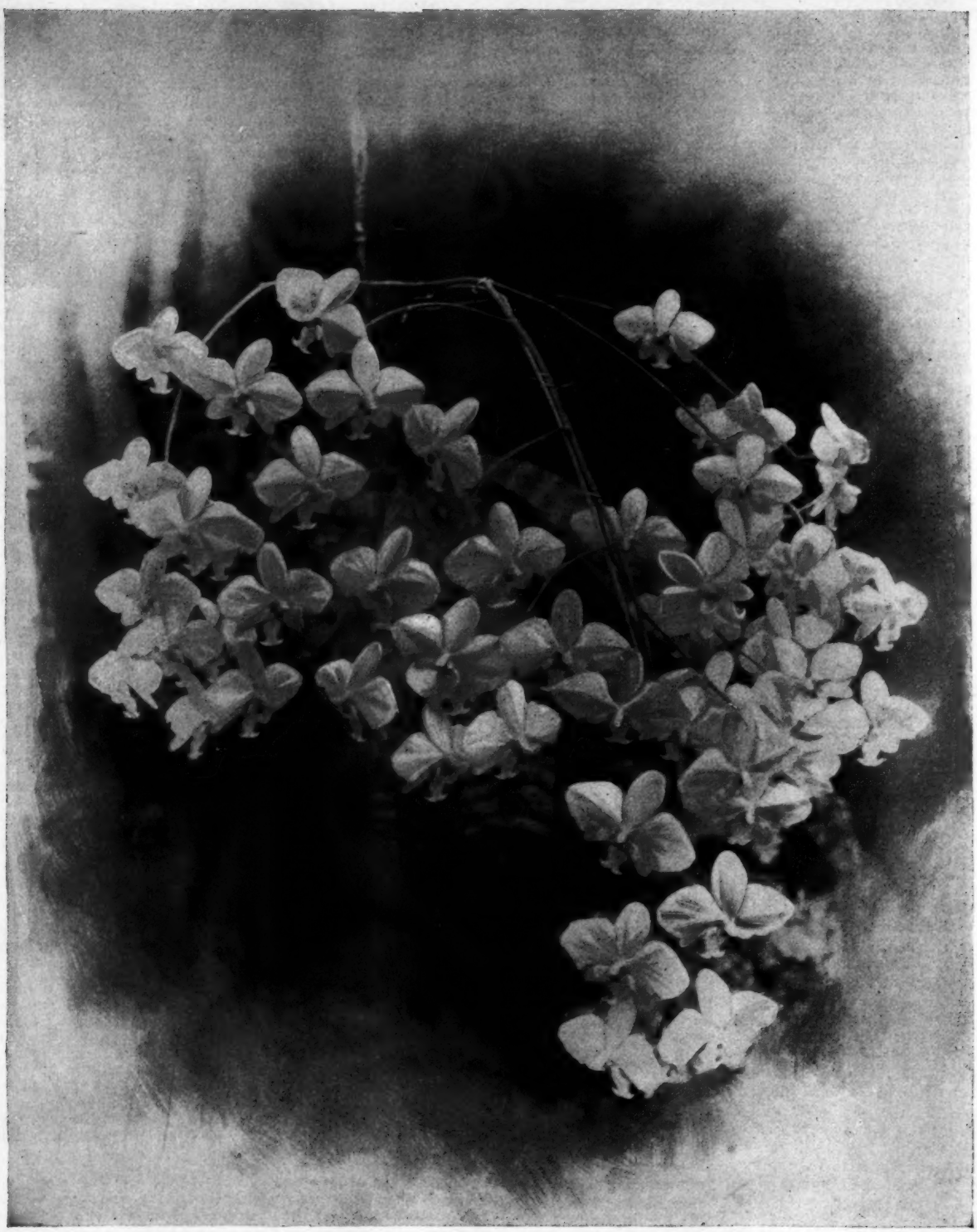

Fig. 64.—Phalænopsis Schilleriana.—See page 389.

tenderest among them (and said to be the best in quality), is only a little discolored in its new wood by our worst winters. I should call it as hardy as the Fameuse Apple. Lutovka, a Polish Pear, said to closely resemble Flemish Beauty, is of about the same hardiness.

BESSEMIANKA takes the lead of the whole list as a hardy and vigorous tree. My oldest specimen, from Professor Budd, is now over twenty feet high, and with three others, which he sent me the next year, is bearing some fruit, having bloomed for two seasons before. Merely as an ornamental tree the Bessemianka is well worth planting. Its remarkably rapid upright growth, its large, thick, glossy leaves, apparently impregnable both to insects and fungi, seem to indicate close relationship to the Chinese Pears; but Mr. Gibb thought the fruit to be of the Bergamot type. We shall learn more on those points hereafter. As this Pear (as its name, both in Russian and also in German, Samenlose, or Kernlose, indicates) has rarely any perfect seeds, I have feared in regard to its setting any fruit until other varieties bloom near it, though the flowers seem perfect. We shall know more about this hereafter. Certainly it can set some fruit unaided. Its season is from September to October.

LUTOVKA is a Pear whose fruiting I await with much interest. Though said to be like Flemish Beauty in fruit, it does not resemble it in growth. It makes but few branches, and hardly needs any pruning, but still it makes a good annual increase of woods.

SAPIENGANKA is a straggling, strong-growing tree, quite noticeable for the bright red petioles of its leaves, which are so distinct as to impart a character to the tree. It is probably the tenderest of the Budd-Gibb importation, and is condemned for the north-west as lacking hardiness, but I think it will do for northern New England. It is said to be a native of Lithuania, and to be generally planted there and in Poland. When well started it grows nearly as fast as Bessemianka, but much more slowly and unshapely in the nursery. It is said to be very productive—the fruit in form like a Bergamot (that is, roundish ovate), and might be mistaken for the Summer Bergamot. The flesh is described as yellowish white, juicy, and finely flavored, and it is said to be a good market pear. Season in Poland, August and September.

TONKOVIETKA.—This seems to be a very slow-growing variety in the nursery and when at first transplanted, but after getting under way it makes a good growth; yet at eight years old it is not half as high as Bessemianka. It is hard to get a straight shoot from it when young. Mr. Gibbs speaks of it (Eighth Report Montreal Horticultural Society, p. 53) as "the hardiest Pear I know which bears an edible fruit—hardier even than Bessemianka." The name means "slender stalk." A fairly good eating pear, but not equal to Bessemianka.

GAKOVSKAYA is a strong-growing, very hardy Pear, reported by Professor Budd to be somewhat like our old Pound Pear, and suited only for cooking. Season, October.

Besides these, there are several Russian Bergamot Pears, varying in season, that are hardy here, and grow well.

Newport, Vt. *T. H. Hoskins.*

Mistakes in Growing Strawberries.

FOR a number of years my beds averaged over 200 bushels of berries per acre. Many acres within the last ten years have yielded not less than 10,000 boxes per acre. This year the average yield has been about 6,000 boxes or quarts per acre. An account of my mistakes may be worth more than one of my success.

In the spring of 1890 we set our plants for this season's crop. After they had been set, early Peas, Beans, Onions, etc., were planted between the rows. In this way a crop can be obtained from the land the first season, and be out of the way by the time the runners need it. Our plants between the rows yielded well. The vines and refuse were taken off and added to the compost-heap. But the weeds—how they did grow! We were driven with work until we hardly knew what to do first. It seemed very difficult to get help, and I kept thinking that by "to-morrow" we would be able to finish cleaning out the Strawberry-beds, and so matters went on until something like half an acre was overgrown with weeds. Finally, it actually cost me more to clear away the weeds when at last I did it, than it would, had I done it before they had caused any damage. I cannot tell just what that neglect has cost me; but Nature charged it up against me, and has taken full pay out of the crop. It was certainly more than $100, and, I believe, it was nearer $150.

One more mistake: We are passing through the driest season I have known for thirty years. The Strawberry crop about here was almost an entire failure, except where it was carried through by artificial watering, and we are almost the only growers in the county who have facilities for so doing. The drought commenced early in the spring, and I noticed that my Strawberry-plants scarcely started even after the growing weather had come. I knew that they were in need of water, but kept thinking that rain would surely come within a day or two, and then they would soon catch up. Rain did not come, and after waiting too long I started the water-pipes upon them. They were kept well watered from this time to the close of the season, but they had been damaged in a way I had not anticipated. They came out with as great an amount of bloom as I had ever seen; but the foliage to carry such a crop was not there. The result was that the berries were not of their usual size, neither did the late sets fill out as they should have done.—*J. M. Smith, in Rural New-Yorker.*

Rose Notes.

THE large-flowered Roses, now so popular, are highly ornamental, yet some of the smaller-flowered varieties are equally useful in their way, and, for certain purposes, are most appropriate. Among these Bon Silene continues to hold high rank, and is still the most satisfactory small pink Rose for in-door use, while Douglas, an old Rose of the Bengal class, producing crimson buds of about the same size, is its worthy companion. Both of these are among the sturdiest of growers, and will give a succession of bloom through the whole season, the flowers being much improved in substance when grown cool. Duchesse de Brabant is also a good pink, though, when growing strongly, the flowers are often produced in clusters. These three Roses may be grown for several years without replanting if they are placed in a solid bed, the Bon Silene, particularly, giving better flowers the second season than the first. It is also benefited by moderately hard pruning.

Young Roses of recent planting should now be growing away freely in order to be in good condition for the winter, and some care in watering is quite necessary during the muggy days that often prevail in August, for the roots will not have spread very far, as yet, in the new soil, and they are easily discouraged by too much moisture at their new roots. Thorough ventilation is essential, not only in the day, but also at night, for long, sappy growth is generally undesirable.

If space can be spared for such purpose, a strong plant of Marechal Niel, trained on wires attached to the roof of the greenhouse, may be made to produce large crops of flowers, if its roots are under control so that the plant can be given a season of rest. It seems almost a pity that this Rose is a cropper in blooming, though its immense golden flowers are of such beauty as to be well worth waiting for, even though they have the disadvantage of having very weak stems.

Another old Rose that is seldom seen of late years is Caroline, a Tea Rose of very good form and fair size. It is light pink in color, the buds being long and pointed, while in habit it resembles Niphetos, and, like the latter, will give the best satisfaction when grafted on Lamarque.

Among the Hybrid Perpetuals for early spring-flowering in pots, Eugenie Verdier should not be overlooked, its silvery pink flowers being peculiarly attractive; in fact, it is one of the best of the Verdier type.

Some discussion has been carried on among Rose-growers as to the necessity or advisability of packing the soil tightly in the benches in which Roses are planted, and the correct method seems to depend upon the character of the soil. In some localities the soil is more liable to become too hard than too loose, and consequently it does not need very much pressure in planting, while in other instances it may be an improvement to compact the soil by pressure with a brick or block of wood after planting.

The application of fertilizers to young Roses should be made with caution, for if overdone the soil may become soured, to the serious injury of the crop, but, as much depends on the character of the soil used, the question of manuring must be decided by the circumstances of the individual grower.

Among the newer Roses we find still another Duchess that is very highly recommended, namely, Duchess of Leeds, a Hybrid Perpetual, described as "a highly colored La France," but said to be quite distinct from Duchess of Albany. It is claimed for this Rose, too, that it lasts well when cut; but as this new-comer has not yet been tested to any extent in this country it is too soon to pass upon its merits.

A new Tea, Mrs. James Wilson, is also well spoken of in England. Its color is pale lemon-yellow, with rosy margins,

and in shape, size and growth it is said greatly to resemble Catherine Mermet.

Ernest Metz apparently did not strike the popular fancy to any great extent as a dark pink Tea, and has not proved able to compete with others of purer color, and consequently but little is heard of it now.

The future of Waban seems assured from the favorable reports received from all sides upon this fine sport from Mermet, and it has been planted in large quantities by the leading cut-flower growers to supply the market for the coming winter. There is apparently but little change among the Hybrid Perpetuals planted for winter use, except the improvement made in quality of flowers produced, and the favorites of former years, such as Mrs. John Laing, Madame Gabriel Luizet, Heinrich Schultheis, Ulrich Brunner and Anna de Diesbach, will doubtless continue among the most popular.

Holmesburg, Pa. *W. H. Taplin.*

Hardy Plant Notes.

THE successful cultivation of *Iris Susiana* out-of-doors (see Garden and Forest, vol. iv., p. 357) is rather unusual, but I think it can be explained. The cultivation of this Iris in Holland has apparently been better understood of late years, and, as I have before stated, seven out of twelve rhizomes, purchased last fall, flowered this spring. This success is also unusual, but is owing, perhaps, to the very fine roots the Dutch growers sent us last fall. The principal reason for advocating pot-culture is, that all of the Oncocyclus group of Iris enjoy a thorough baking in the sun after the flowering season is past and the leaves have died off. Our plants are now undergoing this treatment in a cold frame, and after this thorough ripening will start to grow vigorously next fall. I have never heard of any one who has successfully grown this Iris in the open air any length of time. Our experience has been similar to that of Mr. Barker's in the Harvard Botanic Garden, and a good round number of roots have been used to experiment with.

We hear much of the new *Iris Gatesii*. It belongs to the same group as *I. Susiana*, and is, we are told by Herr Max Leichtlin, the largest-flowered Iris known, and exceeds the Mourning Iris in beauty; let us hope that the plant may soon be common. *I. Iberica* is, to me, quite as beautiful as *I. Susiana*, and I think the markings are much more delicate and refined. The plant itself, when in flower, does not exceed six inches in height. With me it flowers perfectly well in the open ground, but we do not often see it in bulb lists. I quite agree with Mr. Gerard (vol. iv., p. 334) that it is "difficult to understand why, cultural skill being equal, Irish bulbs should be better than others," but certain it is that in Ireland the Narcissus has found a most congenial soil and climate, for any one who has seen them there will find it hard, as I did, to believe they are not indigenous. But the fact is, that many of the commonest weeds here in New England are not native, and yet they grow with more vigor than in their original homes.

Mr. Orcutt's notes on the new Californian Poppy suggest the query why the lovely *Romneya Coulteri* is scarcely to be had here in the east. I have repeatedly purchased seeds and sown them with all care, but have failed to raise anything besides weeds. I sent to California for plants last fall and received nothing but excuses in return. A leading eastern firm to whom I applied "did not have it," although it was advertised in their lists. It is common in England, and I suppose the only way to get it is to send there, for American plants are appreciated there as they deserve to be; even the common *Rudbeckia hirta* is there thought worthy of two synonyms, and the number of these may sometimes be taken as a fair index of the popularity of a plant.

So. Lancaster, Mass. *E. O. Orpet.*

Some New Tufted Pansies.

THE cultivation of the so-called tufted Pansies is increasing in this country, and is likely to become still more general, and we therefore reproduce from *The Garden* some notes by Mr. W. E. Gumbleton on the merits of a few of the newer varieties sent out by Messrs. Dobbie & Co., Rothsay:

Wonder.—This is an extremely pretty variety of most compact and tufted habit of growth in the way of Ardwell Gem, but a decided improvement on that good old variety. It is a profuse and continuous bloomer, and has flowers of a good size, of a clear, pale canary-yellow, with a deeper centre clearly penciled with a few distinctly marked black lines. This is quite an acquisition.

Cottage Maid.—This is in the way of Countess of Kintore but an improvement on that pretty old variety, with most distinct, deep plum-colored centres and almost pure white upper petals. It is also of good and compact habit of growth.

Vernon Lee.—This closely resembles the excellent and effective older variety Jackanapes, with flowers of the same combination of golden lower petals and rich brown upper part of flower, the only difference being that in the newer variety the flowers are of more perfect form and better substance, and the outer half of most of the upper petals is distinctly laced with gold, which is never seen in Jackanapes. The habit is also compact and good.

Queen of Scots.—This is much in the way of Cottage Maid save that the flowers are rather larger, the upper petals of a purer white and the centres purple instead of plum color. The habit of growth, however, is not quite so satisfactory.

Mrs. Grant.—This is a rather pretty and extremely free-blooming sort, of compact habit of growth, and may be briefly described as a paler own sister to Cottage Maid, with more clearly colored upper petals.

Bronze Medal.—This variety has nothing to recommend it save its compact habit of growth. Its flowers are small and poor and of a pale washy shade of brown, quite inferior to many older and better-known varieties.

York and Lancaster.—A most striking variety mottled somewhat like the old Rose of that name, but with purple instead of rose color.

Blue Cloud.—A most lovely variety, which may be briefly described as a white Duchess of Fife with a distinct bordering of pale blue round all the petals. This should prove a great acquisition.

Dawn of Day.—This is also a most distinct and showy variety with large white flowers distinctly and most effectively penciled with blue. Quite an acquisition.

Bullion.—A fine, deep, bright golden yellow, rather a small flower, but a very telling shade of color.

Max Kolb.—This is one of the older sorts, but not so well known as it deserves to be. It is quite the best and most continuous blooming blue Pansy known to me. The flowers are of large size, borne on stout erect foot-stalks well raised above the foliage, and of a fine intense shade of blue, not quite so deep as those of A. Grant, but of rather larger size than those of that fine variety. The centres of the flowers are black, with a small yellow eye. Altogether a most excellent variety.

Orchid Notes.

Cypripedium barbatum, var. superbum.—The numerous varieties of *C. barbatum* are all more or less useful—as, indeed, is the species itself—and they find favor with many growers in preference to the more expensive species and hybrids. The flowers of this variety are much larger than those of the type, and their coloring is more distinct and beautiful. The purple of the lip is deeper in shade; there is more of the purer white in the dorsal sepal, less green, and the purple lines are broader and brighter, approaching reddish purple. It is even more floriferous than the free-flowering species, and the length of the erect scapes, often exceeding fifteen inches in strong plants, with the superior lasting quality of the flowers when cut, admirably adapts them for decorative work. The variegation of the foliage, too, is more distinct and handsome. Had I to choose one Cypripedium, conspicuous above all others for beauty combined with utility and ease of management, from the already long list of species, hybrids and varieties now in cultivation, I should select this variety. It will give satisfaction as to growth, and bloom in an atmosphere of intermediate warmth, but plants grown in the higher temperature of a stove have the flowers and leaves of a somewhat better color.

Phalænopsis Luddemanniana.—Many of the Phalænopsis are more showy than this one, but it is a pretty free-flowering species, well worthy of a place in any general collection of stove-plants. It was introduced to English gardens from the Philippine Islands in 1865, but appears to have flowered earlier with Monsieur Luddemann, of Paris, in compliment to whom it was named by Professor Reichenbach. This Monsieur Luddemann was one of the great Orchid kings of his time, and the now historical collection of Monsieur Pescatore had been under his management. *P. Luddemanniana* is small of growth compared with most other species, the succulent, oblong, acute, light green leaves being little more than six inches in length at their best. The flower-stems are usually longer than the leaves, and appear at various seasons of the year, bearing from four to six blooms two and a half inches across. Petals a trifle smaller than sepals, both oblong, acute, white, with numerous trans-

verse bars of purple; lip trilobed, the central lobe rich violet, the lateral ones white or pale purple. The flowers hold their color from six to eight weeks, but they retain their rigidity and perfection of form in a blanched state much longer. The stems should not be removed when the flowers have fallen, if it is desirable to increase the stock, as afterward they almost invariably bear plantlets. There are several varieties of this species, differing chiefly in the color of the flowers. Some of these varieties are rather scarce, and they all thrive under the ordinary treatment of Phalænopsis.

Cambridge, Mass. *M. Barker.*

Correspondence.

Dr. Schlich's Handbook of Forestry.

To the Editor of Garden and Forest:

Sir,—The publication of the second volume of Dr. Schlich's treatise on forestry, which has been reviewed in your paper, is an event of much importance in the development of an English forestry literature. This volume, which deals with the "Formation and Tending of Woods, or Practical Sylviculture," is the most thorough work upon the application of scientific principles of forestry that we have in our language. Dr. Schlich has arranged and condensed his material with care and skill, and has packed a vast amount of information into the first two hundred and thirty pages. The latter part of the volume consists of "Sylvicultural Notes on British Forest-trees."

While Dr. Schlich's work must always be of value to foresters in any part of the world, a perusal of it suggests that the conditions under which the principles of forestry must be applied in this country are so different from those prevailing in European countries that no book of this kind not written with special reference to the United States can be entirely satisfactory to the American forester. Dr. Schlich seems to contemplate only cases in which forest is to be established upon areas practically treeless. Of the treatment of vast areas of forest suffering from neglect, or from our brutal methods of lumbering, he says little or nothing. Yet in this country such areas, too extensive for the comparatively elaborate systems of culture that he describes, must first receive the forester's attention. Our task is not so much to establish new forests as to treat those that we have in such a way as to obtain the greatest possible amount of forest-products without destroying the forests. The problems peculiar to this country must be worked out here. Probably, even the experience of Dr. Schlich and Dr. Brandes with the old forests of British India would be of comparatively little value in solving these problems. It is at least safe to say that in some of the small details of practical forestry, the irrepressible Yankee will apply his own ideas. Thus, he would devise his tools without reference to the traditions of the Old World. Dr. Schlich gives a number of cuts of tools, of which some are probably excellent, but some seem to the American eye to be too awkward for the use of man. That this is the case is not surprising in the light of the European creed as to hand-tools, thus set forth on page 58 of the volume:

"Many and various are the forms of the several tools which have from time to time been recommended for use in the preparation of the soil. Of these, a considerable number are of doubtful utility. As a general rule, the ordinary laborer gets through more and better work by using the tools with which he is acquainted than by substituting even an improved form of tool, the use of which he has first to learn."

If this comfortable and conservative doctrine had prevailed in this country, how far should we have advanced toward that mechanical superiority that we boast of? The Yankee who learns from a countryman returned from studying forestry in Europe that French and German foresters fear to use their axes in frosty weather lest these tools should be broken, will not believe very readily that we cannot devise our own forestry tools. At least, in the article of axes we may claim some superiority. With what Homeric laughter would the hardy forest-destroyers of Maine and Michigan shake their snow-laden Pines if some trained woodsman from the Black Forest should expound to them in friendly warning his theory of axes and frost!

A perusal of Dr. Schlich's list of twenty British forest-trees, not all natives of the British Isles, and not all trees that we should think of including among timber-trees, brings to mind the wonderful variety of forest-wealth of our Appalachian region, not to say of our whole country.

But with these empty gratulations our self-satisfaction must cease. Our chief instrument of forest-destruction is better than the European's; and nature has bestowed upon us a wonderful variety of valuable trees against which we may turn this instrument. It is idle to deny that in all essential points of scientific forestry we must look to the Old World for instruction. Dr. Schlich's book is so clear and interesting in its presentation of the subject that all in this country who have any interest in the subject should read it with care. Such a book as this should do much to temper and direct the often-distorted enthusiasm of our forest-lovers.

New York. *James W. Pryor.*

Experiments and Expedients.

To the Editor of Garden and Forest:

Sir,—For thirty years it has been difficult to raise a good Quince-crop in this section, but the fruit can be had with proper precaution. The trees are more tender when young, and I then take special care to secure well-ripened wood, and in October tie it about with straw. As the trees get older they become hardier, but the fruit is likely to be scarce, on account of the weakening of the terminal wood; I therefore tie the limbs together with hop-twine, a coarse, soft, but strong twine, and after that tie about the bunched limbs straw or hay. This precaution, with hedges of Arbor-vitæ to the west and north, leaves the trees vigorous enough to produce full crops. Quince-trees are worth growing for their beauty in the blooming season, and an Orange-grove is hardly more beautiful than a Quince-orchard in full-bearing.

It has been difficult, too, for the last half century to grow Peaches in this region. Fifty years ago I saw my father pick Sweetwater grapes, peaches and wagon-loads of quinces from his gardens. But the borers came, and then followed greater inequality of temperature. I have for twenty years persisted in growing Peach-trees, both seedlings and grafts. Unprotected, we secure a crop just about once in ten years. This year I have fifty-five trees loaded. My experiments have included: (1) Winding the bearing limbs in straw, which is rarely of much avail; (2) bending down limbs and covering with sod or soil, which leads to rot of buds and sometimes branches; (3) bending down the trees and holding them with spikes, which is efficient in a limited degree; (4) building a rude house over a tree or close row of trees, which is less trouble than it appears in the telling, and when the trees are so covered, and fine hay stuffed in over the tops before nailing on a roof, this affords sufficient protection for our hardiest sorts. But (5) my best experiment has been the planting of a large, cheap, roofless house with six trees. Over the top I nail narrow slats, and allow my hens to run in it for the summer; during winter I spread over corn-stalks, and hold them in place with poles. Of course, the roof must be firmly supported. Here my trees are full of fruit. Another (6) plan has been to grow a few trees in boxes and set them in the cellar for the winter. These do well with little care. In a Peach section such precautions would be laughable; but here peaches are peaches, and it pays to take much care and try many experiments.

Clinton, N. Y. *E. P. Powell.*

A Good Example.

To the Editor of Garden and Forest:

Sir,—In the passage leading to the town library at Tunbridge Wells, an exhibit is made, and constantly renewed, of the local flora and common plants. The specimens are placed in separate glass vessels and in front of each is a label bearing the common and botanical names. Such a means of popular instruction and interest might be well adopted at some of our American summer resorts, and at very small outlay.

Tunbridge Wells. *Francis Skinner.*

Recent Publications.

Jinrikisha Days in Japan. By Elizabeth Ruhamah Scidmore. Illustrated. New York: Harper & Brothers. 1891.

Many books have been written about Japan, and most of them contain descriptions of its forests and gardens, its flowers and flower-festivals. But the subject seems inexhaustible, for each gives us new details and general pictures. Mrs. Scidmore's little book is not written from the scientific or from the artistic point of view. It is for popular reading, and professes merely to sketch "something of the Japan of to-day as it appeared to a tourist, who was a foreign resident as well," being "the outcome of two visits, covering nearly three years' stay in the Island Empire." But its author has a keen eye and a knowledge of the value of definite information, as well as a

feeling for the beautiful and the picturesque, and a very graceful pen. So her book is interesting from end to end, and when we lay it down we feel that, despite all we may have read upon the subject before, she has taught us something fresh and given us another and very charming general impression of the delightful land she describes.

The first thing she speaks of, after landing at Yokohama, is the colony of florists at the west end of the town, where one finds "toy gardens filled with vegetable miracles; burlesques and fantasies of horticulture; dwarf trees, a hundred years old, that could be put in the pocket; huge single flowers and marvelous masses of smaller blossoms; Cherry-trees that bear no cherries; Plum-trees that bloom in midwinter, but have neither leaves nor fruit; and Roses—that favorite flower which the foreigner brought with him—flowering in Californian profusion." And from here on we read so continually of the skill of the horticulturist and the passionate love of the people for flowers that once more we feel, as other writers had already made us feel, that if Japan is the land of art it is still more distinctively the land of flowers. At Yokohama "a large business is done in the exportation of Japanese plants and bulbs encased in a thick coating of mud, which makes an air-tight case to protect them during the sea-voyage. Ingenious Fern-pieces are protected in the same way. These grotesque things are produced by wrapping in moist earth the long woody roots of a fine-leaved variety of Fern. They are made to imitate dragons, junks, temples, boats, lanterns, pagodas, bells, balls, circles and every familiar object. When bought they look dead. If hung for a few days in the warm sun and occasionally dipped in water, they change into feathery green objects that grow more and more beautiful, and are far more artistic than our own conventional hanging basket."

Mrs. Scidmore makes a novel suggestion when, after recognizing the fact that the Japanese are the foremost landscape-gardeners in the world, giving their genius "equal play in an area of a yard or a thousand feet," she says that "a Japanese gardener will, doubtless, come to be considered as necessary a part of a great American establishment as a French maid or an English coachman. From generations of nature-loving and flower-worshiping ancestors these gentle followers of Adam's profession have inherited an intimacy with growing things, and a power over them, that we cannot even understand. Their very farming is artistic gardening, and their gardening half necromancy."

Near Yokohama is the little village of Kawana, whose headman has a famous collection of Chrysanthemums, the goal of many autumnal pilgrimages. His great thatched house, in a courtyard, is faced in front by rows of mat-sheds, "covering the precious flowers that stand in files as evenly as soldiers, the tops soft masses of great frowsy, curly-petaled, wide-spreading blooms, shading to every tint of lilac, pink, rose, russet, brown, gold, orange, pale yellow and snow-white. It was there that we ate a salad made of yellow Chrysanthemum petals, most æsthetic of dishes. The trays of golden leaves in the kitchen of the house indicated that the master enjoyed this ambrosial feast habitually, and, perhaps, dropped the yellow shreds in his *saké* cup, to prolong his life and avert calamities, as they are warranted to do." Not far away is Sugita, where the Plum-trees bud in January and blossom gradually, so that "the last week of February finds the dead-looking branches clothed with clouds of starry white flowers." Around the thatched roof of an old temple stand Plum-trees covered with blossoms of various colors, white, pale pink, yellow, rose or deep carnation-red, and "just outside the temple door is a Plum-tree whose age is lost in legend. Its bent and crooked limbs and propped-up branches sustain a thick-massed pyramid of pale rose-pink. The outer boughs droop like a Weeping Willow, and their flowers seem to be slipping down them like rosy rain-drops. Poets and peers, dreamers and plodders, coolies, fishermen and the unspiritual foreigner, all admire this lovely tree, and its wide arms flutter with poems in its praise"; for, as Mrs. Scidmore remarks, "spring poetry" is not a drug in Japan, and the trees themselves gladly accept the shower of manuscripts annually produced in their honor. We cannot follow all her descriptions of the flower festivals of a Japanese spring, when, as our readers have often been told, the whole population turns into the suburbs for merry-making, philosophers and statesmen leave their labors to journey to some famous garden, perhaps a three days' trip away, and the newspapers print daily bulletins to tell how the blossoms are progressing. But, she says, fair as the spring days are, the autumn, when an Indian summer lasts sometimes four months in unbroken loveliness, is equally attractive. When the Maple-leaves begin to turn, "autumnal Japan is the typical earthly Paradise."

Near the Ikegami temples the priests display with pride a Moutan, or Tree Peony, "now three hundred years old, whose solid trunks and wrinkled bark uphold a multitude of stately blossoms." And when these bloom, and Azaleas of varied colors crowd every garden and line the river-banks, then, too, the *Fuji*, or Wistaria, is in blossom, "and at the Kameido temple makes an eighth wonder of the world. Every householder has his Wistaria-trellis, generally reaching out as a canopy over some inlet, or, as at Kameido, forming the roofs of the open-air tea-houses edging the lake. . . . Blossoms two, and even three, feet long are common, and only a great swaying tassel, four feet in length, draws a 'Naruhodo!' (wonderful!) from the connoisseurs." The great objects of wicker-work, clothed completely with Chrysanthemum-blossoms which amaze every traveler, are described at length by Mrs. Scidmore, who says that, in addition to single forms of men and beasts, one sees "whole mountain-sides of flowers, with water-falls of white blossoms spreading into floral streams, and Chrysanthemum women leading Chrysanthemum horses ridden by Chrysanthemum men across Chrysanthemum bridges. Gigantic flowers, microscopic flowers, plants of a single blossom, single plants of two hundred blossoms, have Bamboo tents to themselves" at the shows where these figures are exhibited; and their special attractions are as loudly proclaimed as the charms of fat women and skeleton men in the side-shows of American fairs.

A little description of the "Maple-leaf Club-house," near the Shiba temples, well shows the feeling of the Japanese for artistic decoration. Here there was a "long low room, usually divided into three by screens of dull gold paper. One whole side of this beautiful apartment was open to the garden beyond a railed balcony of polished cedar, and the view across the Maple-trees and dense groves of Shiba to the waters of the bay was enchanting. The decorations of the club-house repeat the Maples that fill the grounds. The wall-screens are painted with delicate branches, the panels above the screens are carved with them, and in the outer wall and balcony-rail are leaf-shaped openings. The dresses of the pretty *nesans*, the crape cushions on the floor, the porcelain and lacquer dishes, the *saké* bottles and their carved stands, the fans and bonbons, all display the Maple-leaf." On another page we read that even the charcoal under the tea-kettle is an artistic object, being twigs of Azalea charred and coated with lime without injury to their delicate forms.

In the chapter devoted to the theatre we find flowers again playing a prominent part. The actors enter the stage by two long raised walks through the auditorium, broad enough to accommodate horses and *jinrikishas;* these walks are called *hana michi*, or flower-walks, "and as a popular actor advances his way is strewn with flowers." Garden, forest and landscape effects are made on the stage "by using potted trees and shrubs uprooted for transplanting. The ever-ready Bamboo is at hand, and the tall Dragon-grass and the scene-painters produce extraordinary illusions in the backgrounds and wings." But we should never end if we tried to extract all the suggestive passages by means of which Mrs. Scidmore paints the love of the Japanese for flowers. We can only recommend her book to our readers as containing not only many more such passages, but delightful descriptions of scenery and sympathetic accounts of the people who live among these marvels of beauty, and have themselves produced so many of them.

Bulletin No. 93 of the Agricultural Experiment Station connected with the University of California is devoted to the investigation of different varieties of Oranges and Lemons grown in that state. The purpose of the investigation has been to show in a comprehensive way the composition of the leading varieties of these fruits, as they are grown in the different Citrus regions, and this is of great value to cultivators inasmuch as it shows the influence of various conditions of soil and climate upon the product of the groves, and also gives information as to the appropriate fertilizers to be used in each case. The physical data—that is, the per cent. of rind, pulp, juice and the like—are of interest from a commercial standpoint because they show the true quality of the fruit. The difference between an orange or a lemon which has such a thickness of rind and such a percentage of pulp and juice as characterize the best kinds of these fruits, and one whose weight is more than one-third rind and more than one-quarter dry pulp, is very apparent. And yet such differences exist. Besides this, although fruit is generally considered a pure luxury, consumers may find much valuable knowledge from studying the relative food-values of different varieties. The nourishing portions, which are especially shown in the saccha-

rine and nitrogenous contents, vary greatly among different kinds and under different conditions of growth. It is therefore an important question of domestic economy to the consumer to know what fruit he is using. The ash analysis, together with the nitrogenous contents of the standard varieties, show that the ingredients which the soil loses by an ordinary crop are a serious drain upon its supporting value, and what particular plant-foods suffer the greatest loss can only be known by determining the actual constituents that are withdrawn.

The body of the bulletin is taken up with a description of various varieties of oranges received from different places, together with a physical analysis, a proximate general analysis, and an analysis of the ash. For example, eight specimens of the Navel Orange, taken from different parts of the state, were investigated, and a similar analysis was made of several specimens of Mediterranean Sweet, Saint Michael's, Valencia, Malta Blood, Tangerine and some seedlings. Of course, it would not be of interest to quote all these details, but some of the prominent points of similarity and difference which have been brought out in the tables are interesting. In comparing the oranges as to their proportion of rind to flesh, the Navel, although the choicest of oranges, has, contrary to popular impression, no advantage in this respect over the Mediterranean Sweet or Saint Michael's. The average Navel contains about seventy-two per cent. of flesh, while the average Mediterranean Sweet shows seventy-three per cent., and the Saint Michael's eighty-one per cent.

In regard to the proportion of juice to flesh the Navel seems to be the driest, while Saint Michael's is the juiciest. The skin of the Navel, although thin, is hard and solid and weighs heavier than the more corky skins of the Mediterranean Sweet. As to the sugar contents of the juice, the maximum of sugar appears in the Navel orange grown on the hills, but it is approached very closely by other Navels, by the Mediterranean Sweet, the Malta Blood, the Pomona, and the Tangerine from San Gabriel. This Tangerine shows the highest proportion of cane-sugar in the whole series, but to what extent the cane-sugar determines the sweetness to the taste is a matter not fully understood. The proportion between the grape-sugar and the fruit-sugar is not yet determined, and is, of course, an essential factor in the case. The average sugar-content of fully ripe Navels, from all localities, is 10.8 per cent., which is more than that of the other varieties. A Valencia orange from Pomona shows a much lower sugar percentage. In respect to acid in the juice, the Malta Blood contains a maximum of more than two per cent., with an average of one-sixth per cent. in three samples examined. In contrast with the Malta Blood, Saint Michael's has a low acid-content, but this is combined with a low sugar percentage.

In discussing the nutritive value of the fruit the flesh-forming ingredients are the most important, and it is, therefore, of interest to compare the albuminoids of oranges with those of other fruits, and of different varieties among themselves. According to European data, oranges stand first among fruits in this regard, followed by prunes second, peaches and apricots third, bananas and grapes fourth, while apples and pears stand nearly the lowest on the list. The determinations of albuminoids in California oranges show smaller percentages, so that it must be concluded that the California fruit is less nourishing than that of Sicily. The difference observed, however, may be due to the age of the trees which bear the fruit, as California trees are usually young.

Referring to the composition of the ash and nitrogen contents of fruits, it is said that grapes stand first and oranges stand second in the quantity of mineral matter withdrawn from the soil. Heretofore, all conclusions bearing upon the ash and nitrogen of oranges and lemons have been based on European data, but from the comparative exhibit made here it seems, so far as oranges are concerned, that the California fruit draws much less upon all the ingredients that have to be replaced by fertilization, while the California lemon draws about the same amount of mineral from the soil as the European orange. Potash is the predominating ingredient in the ash, amounting to quite half its weight, and it is, therefore, highly important that the supply of this substance should be kept up. Fortunately, it has been shown, by previous investigation, that the potash supply in California soils and irrigation waters is exceptionally large, so that in many cases the demand of the fruit upon this element will be amply supplied in the course of cultivation. Phosphoric acid is not drawn upon so heavily, but, since the supply of this element is usually limited in California soils, it is probable that it would be prudent to use fertilizers containing it in large proportion. The natural supply of nitrogen, especially in southern mesa soils, is not large, and, as the draft made by the Orange on this substance is very heavy, it should be always among the first elements of plant-food supplied. Next to potash, lime is the ingredient most abundantly taken from the soil, although its percentage varies very widely, but the supply of lime in California soils is so universally ample within the orange-growing region that no replacement of this substance in fertilization will be called for. The large amount of sulphuric acid found in this fruit suggests gypsum as an acceptable fertilizing agent.

In regard to lemons, it can only be said, from the incompleteness of the investigation, that the acid, or the most important ingredient of this fruit, exceeds the commonly assumed average, and this point should ensure to California-grown lemons a high position in commerce. The relatively large proportion of sugar shown by the analysis is a feature which will further commend them to the consumer's taste, but there are very great differences among varieties in the proportion of rind to flesh and to extractable juice.

Bulletin 82 of the New Jersey Experiment Station gives a carefully illustrated account of the history and habits of the Rose-chafer, together with the details of some experiments for destroying this insect, which, upon the whole, are rather depressing. Careful trials were made with the arsenites, copper mixtures, pyrethrum, kerosene, lime, tobacco, ascetic acid, quassia, digitalis, corrosive sublimate, muriate of ammonia, cyanide of potassium, sludgite, kainit, alum, white hellebore, carbolic acid, Ailanthus-blossoms, and other alleged repellants and poisons with very unsatisfactory results. The hot-water cure, suggested by Mr. Kellogg, of Vineland, and at a later date recommended by Mr. E. S. Carman, was tried, and it showed that water heated to 125° Fahrenheit will kill the insect, but in practice it was found impossible to get the spray hot enough to kill at any considerable distance from the nozzle of the force-pump. It seemed to Professor Smith that only a solid jet of water could be kept hot if carried even eight or ten feet, and then would follow the practical difficulty of securing a large and continuous supply.

Mr. A. S. Fuller suggests that the species of Spiræa are very attractive to these insects, and that in small gardens, if a full supply of food from Spiræas was afforded, they might leave other plants. Following this line of suggestion, Professor Smith thinks it is possible to prevent in part the development of the insects in cultivated ground, and the outside of vineyards can often be defended by the counter-attraction of a few rows of Blackberries. The blossoms of these plants are great favorites with the beetles, and they would be likely to arrest the incoming crowds. If they were collected from these plants the injury to the vineyard might be largely averted. This matter of collecting seems, after all, to Professor Smith the most practicable method of dealing with the pest, and various mechanical devices similar to an entomologist's umbrella are figured. By shaking the vines the insects can be caught in these receptacles, and if the collecting is done once or twice a day for three weeks the crop may be saved. The Rose-chafer has no day of rest, and the collecting must be done on Sundays as well as other days, for a single twenty-four hours' neglect may result in as much injury as is prevented by six days' work. The insects come in such numbers that they cover everything—acres of Grape-vines, Strawberries and Blackberries, with thousands of fruit and other trees, and the best that Professor Smith hopes from persistent collecting, if carried on generally, is that, after some years, their number may be lessened so as to bring, for a time, comparative exemption from their attacks. At present, however, there are too many abandoned fields to make this appear sanguine, as the best of their breeding-places are left undisturbed, and no method of killing them before they come out of the ground has yet been devised.

Notes.

A basket of rare and costly Orchids, presented to the Empress of Germany by Messrs. Sander & Co., was the subject of a supplementary illustration in a late number of the *Gardeners' Chronicle*.

It is stated in *Fruits and Flowers of Oregon and Washington* —the new horticultural monthly of the north-west—that Peach-trees in Oregon measure fifteen inches in girth at three years old, with a spread of branches sixteen feet in diameter.

Perhaps few persons who visit the Botanical Gardens in Liverpool know that they were founded by William Roscoe, the celebrated historian. His name is preserved in the annals of science by that of the genus Roscœa, which includes half a

dozen species of herbaceous Himalayan plants, sometimes cultivated in greenhouses.

Decumaria barbara is quite at home in the neigborhood of Philadelphia, and in Laurel Hill Cemetery it is quite largely planted, and clings to walls as closely as English Ivy. Its leaves are large and lustrous, and it will certainly be used more generally when its good qualities are appreciated as they should be.

"The total number of trees and shrubs indigenous to this country," wrote Downing in the year 1846, "is about 530." How largely our knowledge of the products of the United States has advanced since this time will be seen when we note that 420 indigenous species of trees are now recognized within their area, while the number of indigenous shrubs must be nearly a thousand.

The old saying, that "language is a bundle of fossil metaphors," is well illustrated by the word disseminate, which, etymologically, means "to scatter seed," and, as a writer on plant-life recently remarked, "points to the fact that everywhere in nature seeds are scattered broadcast, infinite pains being taken by the mother-plant for their general diffusion over wide areas of woodland, plain or prairie."

We have received from our correspondent, Monsieur Charles Naudin, a photograph of a noble flowering specimen of *Yucca filifera* (see Garden and Forest, vol. i., pp. 78 and 79), taken in the gardens of the Villa Thuret. Judged by the height of the man standing by the tree, it must be from twenty to thirty feet high, and forms one of a group of five specimens, all about equal in height.

"The principle which would govern us," wrote Downing nearly fifty years ago, "if we were planting the streets of rural towns is this: Select the finest indigenous tree or trees, such as the soil and climate of the place will bring to the highest perfection." Unfortunately, the sound and sensible advice thus briefly conveyed is almost as sorely needed to-day as when Downing's words were written.

"Midway between Fifteenth and Sixteenth Streets," says the *New York Sun*, "at the curb lies a broken brown stone which bears the inscription, 'Union Square. Founded 1832.' It is a part of the pavement, and yet New Yorkers have walked that way for forty years without noticing this modest official record. This was a wild locality in 1832. A farm-house stood at the junction of the Bowery road and the road to Bloomingdale in the upper part of the present little park, and dust and blackberries abounded at the road-sides. The city straightened out the streets at that time into a square, and the park was an afterthought. The Hon. Walter Bowne was Mayor at the time."

A dispatch to *The Tribune* states that "next winter will see the shipment of an enormous quantity of fresh vegetables from southern California to New York and other eastern cities. The railroads have given a rate of three cents per pound, which allows a big profit on all vegetables that will bear transportation. Tomatoes, peas, beans, new potatoes, cauliflower and other vegetables can be supplied by southern California from the 1st of December to the 1st of March, during which time there is practically no competition from Florida. It is claimed that this industry will eclipse fruit-growing, as it will stimulate a demand for fresh vegetables where canned goods are now used."

The botanical name of the Carnation, Dianthus, signifies Jove's flower, being a contraction of *Dios anthos*, while the English name seems to have been bestowed to characterize the flesh-colored hue of some of the commoner kinds. Its earliest form appears to have been "Carnadine," and Drayton long ago wrote: "The brave Carnation . . . so of his color called." In the last century Carnations were in special favor in Holland and England, and we may read in a number of the *Spectator* that "now and then a few fanciful people spend all their time in the cultivation of a single Tulip or a Carnation." Fifty years ago between three and four hundred varieties of the Carnation were already noted in English catalogues.

Mr. Sereno Watson's eighteenth contribution to American botany, reprinted from the twenty-sixth volume of the *Proceedings of the American Academy of Arts and Sciences*, has appeared. It contains descriptions of some new North American plants, chiefly of the United States, with a revision of the American species of the genus Erythronium, in which Mr. Watson now recognizes thirteen North American species; descriptions of new Mexican plants collected chiefly by Mr. C. G. Pringle in 1889 and 1890, and including a few new genera and several new species; a note upon a wild species of Zea, from Mexico, and upon a small collection of plants made in the island of Ascension by Mr. E. G. Loomis, of the Nautical Almanac Bureau, during the visit of the United States Eclipse Expedition to the island in 1889.

The editor of the *Country Gentleman* says that he once received some Peach-cions in summer, and the sender had left their leaves on to shade them and to keep them from drying up. Of course, these leaves sent a great deal of watery vapor into the dry summer air, and in a few hours the shoots were withered. If he had cut all the leaves off, leaving only the stumps of the leaf-stalks, they would have remained plump and fresh. We often see radishes offered for sale in grocery-windows with all the leaves on, and in a few hours they are shrunk and withered. If the leaves of radishes, beets and similar vegetables are cut off at once as soon as the roots are taken from the ground they will keep plump and fresh. If the leaves are left on trees which are cut down in summer they will pump the sap out of the timber and hasten the seasoning of the wood, which might otherwise become sap-rotten.

A photograph recently reproduced in the *North-western Lumberman* showed a redwood plank of extraordinary size, measuring sixteen feet five inches in width by twelve feet nine inches in length and five inches in thickness. It was cut from a tree thirty-five feet in diameter and three hundred feet tall, being hewn out of the stump after the tree was cut at about twenty-eight feet above the ground. A locomotive, attached to a block and tackle, was needed to lower it, and two men were occupied for a month in roughly preparing it for shipment. The price of this labor, added to the cost of transportation, amounted to some $3,000, after the plank had been taken by water to San Francisco. The tree stood in Humboldt County, California, and the plank, after being exhibited in various cities, will probably be a feature of the World's Fair at Chicago. A specially constructed car is required for its transportation.

"After some trouble," wrote Fortune, in his account of his travels in the Malay Archipelago in 1845, "I discovered the locality of the beautiful *Phalænopsis amabilis*. I was in the habit of making an Indian's hut in the wood my headquarters for a certain time, where I held a sort of market for the purchase of orchidaceous plants. The ground in front of the hut was usually strewed with these plants in the state in which they had been cut from the trees, and often covered with flowers. The Phalænopsis in particular was very beautiful at this time. I was most anxious to get large specimens of this plant, and offered a dollar, which was a high sum in an Indian forest, for the largest specimen which should be brought to me. The lover of this beautiful tribe of plants will easily imagine the delight I felt when I saw two Indians approaching with a plant of extraordinary size, having ten or twelve branching flower-stalks upon it and upward of a hundred flowers in full bloom." This plant was successfully transported to England and established in the garden of the Horticultural Society, and, although it had been somewhat cut to get it into the packing-case, was by far the largest specimen then to be seen in Europe.

In his *Sylva*, written two centuries ago, Evelyn notes, among other giant Linden-trees in Germany, one of such size and antiquity that it was recognized in the name of the town in Wurtemberg where it grew, this being called Neustadt-an-der-Linden. He describes it as measuring more than twenty-seven feet in circumference, and covering, with the spread of its branches, a space four hundred and three feet in diameter, and says that it was "set about with divers columns and monuments of stone (now eighty-two in number and formerly above a hundred more) which several princes and noble persons have adorned, and which, as so many pillars, serve likewise to support the umbrageous and venerable boughs." Even then, Evelyn continues, the tree had once been "much ampler, as the ruins and distances of the columns declare, which the rude soldiers have greatly impared." Some of the inscriptions on the stones were copied by him, the oldest, bearing a date, having been cut in the year 1550. In 1837 this giant still survived, and a drawing then made of it, for Loudon's Arboretum, showed its trunk surrounded by a wooden balustrade raised on a coping of stone, and its limbs supported by no less than 108 columns. The people of the village being in the habit of sitting in the tree and eating, several Gooseberry-bushes had sprung up in the crevices of the bark, and their fruit was gathered and sold to visitors. It would be interesting to know whether this tree still survives in the year 1891.

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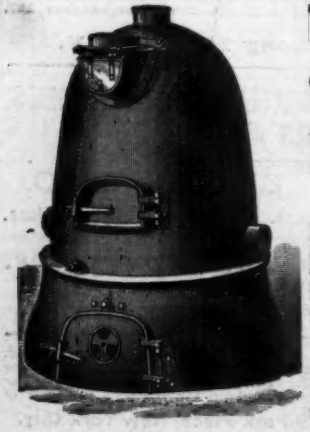

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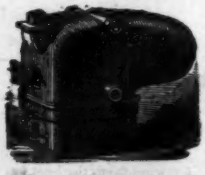

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